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(21)Application number : **10-342840**(71)Applicant : **KONICA CORP**(22)Date of filing : **02.12.1998**(72)Inventor : **YAMAZAKI HIROSHI
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(54) ELECTROSTATIC CHARGE IMAGE DEVELOPING TONER, ITS PRODUCTION AND IMAGE FORMING METHOD**(57)Abstract:**

PROBLEM TO BE SOLVED: To obtain an electrostatic charge image developing toner adaptable to requirements for the increase of the resolution of an image, uniform in shape and having a small particle diameter and to stably form a high resolution image using the toner over a long period of time.

SOLUTION: The toner consists essentially of a resin and a colorant, has 3-9 μm volume average particle diameter and an ellipticity represented by the equation $(\text{ellipticity}) = (\text{minor axis diameter of ellipse}) / (\text{major axis diameter of ellipse})$ in the range of 0.50-0.85 and contains $\geq 60\%$ by number of toner particles whose ellipticity is in the range of 0.60-0.80.

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CLAIMS

[Claim(s)]

[Claim 1] The toner for electrostatic-charge image development with which the volume mean particle diameter of this toner is 3-9 micrometers, and the ratio of the ellipse particle shape is indicated to be with the following relation is within the limits of 0.50-0.85, and the thing of the configuration of the range of 0.60-0.80 is characterized by 60-piece being several % or more in the toner for electrostatic-charge image development which consists of resin and a coloring agent at least.

Ratio =(minor axis of ellipse)/of an ellipse (major axis of an ellipse)

[Claim 2] In the image formation approach of contacting the electrostatic latent image formed on the photo conductor in the developer layer formed on the developer conveyance member, and developing it This developer comes to contain the toner for electrostatic-charge image development which consists of resin and a coloring agent at least. The image formation approach that the volume mean particle diameter of this toner is 3-9 micrometers, and the ratio of the ellipse particle shape is indicated to be with the following relation is within the limits of 0.50-0.85, and the thing of the configuration of the range of 0.60-0.80 is characterized by 60-piece being the toner it is [toner] several % or more.

Ratio =(minor axis of ellipse)/of an ellipse (major axis of an ellipse)

[Claim 3] In the image formation approach of making the electrostatic latent image formed on the photo conductor countering the developer layer formed on the developer conveyance member in the state of non-contact, making only the toner for electrostatic-charge image development flying, and developing This developer comes to contain the toner for electrostatic-charge image development which consists of resin and a coloring agent at least. The image formation approach that the volume mean particle diameter of this toner is 3-9 micrometers, and the ratio of the ellipse particle shape is indicated to be with the following relation is within the limits of 0.50-0.85, and the thing of the configuration of the range of 0.60-0.80 is characterized by 60-piece being the toner it is [toner] several % or more.

Ratio =(minor axis of ellipse)/of an ellipse (major axis of an ellipse)

[Claim 4] the manufacture approach of the toner for electrostatic charge image development that the volume mean particle diameter of this toner be 3-9 micrometers , and the ratio of the ellipse particle shape be indicate to be with the following relation be within the limits of 0.50-0.85 , and the thing of the configuration of the range of 0.60-0.80 be characterize by 60 piece be several % or more in the manufacture approach of the toner for electrostatic charge image development of make a resin particle and a color particle come to meet in a drainage system medium at least .

Ratio =(minor axis of ellipse)/of an ellipse (major axis of an ellipse)

[Claim 5] In the manufacture approach of the toner for electrostatic-charge image development which uses an air-current type dryer after making a resin particle and a color particle meet in a drainage system medium at least The manufacture approach of the toner for electrostatic-charge image development that the volume mean particle diameter of this toner is 3-9 micrometers, and the ratio of the ellipse particle shape is indicated to be with the following relation is within the limits of 0.50-0.85, and the thing of the configuration of the range of 0.60-

0.80 is characterized by 60-piece being several % or more.

[Translation done.]